DEPARTMENT OF SOCIAL AND HEALTH SERVICES

PO Box 45500 • *Olympia WA 98504-5500*

May 18, 2004

Ms. Juli Harkins, Project Officer
Centers for Medicare and Medicaid Services
Center for Medicaid and State Operations
7500 Security Boulevard
Mail Stop S2-01-16
Baltimore, Maryland 21224-1850

Dear Ms. Harkins:

Under the Special Terms and Conditions (STC) of the Medicaid Demonstration Waiver Project No. 11-W-00180/0, enclosed is a draft evaluation design for the project.

As set forth in STC Section VII.3.i dealing with the evaluation design, our draft design includes a discussion of the demonstration hypotheses that will be tested, outcome measures that will be included on the evaluation, data and methods that will be used to collect information and, a discussion of how the demonstration's evaluation will be isolated from other initiatives that are occurring in our state.

The overarching hypothesis to be tested is whether modest monthly premiums for Medicaid Categorically Needy (CN) Optional children will negatively affect children's enrollment in Medicaid, child health status, Medicaid program costs, or the broader health care delivery system. The design includes a detailed discussion of how we would address the impact on program participation, impacts on members/clients who left the program, and the impact on health care delivery system and community health outcomes.

We are proposing a unique design approach that will involve two stages. In order to inform state policy makers on the impact of adopting premiums in a timely manner to make any necessary policies changes, we are proposing to conduct a stage one evaluation during the first year of the demonstration. We also would conduct a second stage of the evaluation during the fifth year of the evaluation to meet the STC requirements of submitting a draft evaluation report 120 days prior to the expiration of the demonstration.

Our design proposal is also unique in that we want to combine our first stage premium evaluation with an evaluation of changes that have been occurring in our state's Basic Health (BH) program.   As discussed in the evaluation design, there have been changes in BH that may have indirect effects on Medicaid, and conversely the adoption of premiums might affect BH (e.g., low-income enrollee sponsorship).   We believe combining the two evaluations will enhance information for state and national policy makers, and will make our evaluation more marketable for grant funding.
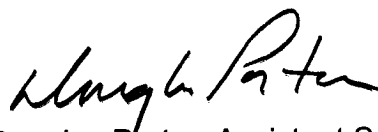
Our evaluation design was developed by our department's Research & Data Analysis Division (RDAD).   Participants in this draft design included staff from our Medical Assistance Administration, the state's Health Care Authority (HCA) which is responsible for administering the BH program, and the Governor's Executive Policy Office which is responsible for administering our "State Planning Grant on Access to Health Insurance".

We have not yet had an opportunity to solicit feedback from our Title XIX Advisory Committee nor various provider associations or stakeholders who are very concerned about the implementation of premiums for children's health coverage.   As part of the next phase in developing the evaluation design, we want to obtain input from stakeholders to ensure that we are attempting to address most of the relevant issues associated with this demonstration.

This said, we view the submittal of our draft evaluation design to comport with STC requirements.   We would want the opportunity to work with the Center for Medicaid and State Operations and stakeholders over the next several months to develop a final evaluation design.

Roger Gantz of my staff will be the contact for the next phase in developing a finalized design.   Please contact Mr. Gantz directly if you have any questions.

Sincerely,

Douglas Porter, Assistant Secretary
Medical Assistance Administration

Enclosure

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WASHINGTON MEDICAID REFORM WAIVER

PROJECT NO. 11-W-00180/0

EVALUATION DESIGN

OVERVIEW

To support the State of Washington's Demonstration Project (No.11-W-00180/0) requirements, the Department of Social and Health Services (DSHS) will comprehensively evaluate the premium program to provide the Centers for Medicare and Medicaid Services (CMS) and state policy makers with information on the impact of premiums on program participation, health outcomes for affected clients, and the health care delivery system. Washington is in a unique position to assess these impacts because of its extensive data analysis capacity.

Although states have implemented State Children's Health Insurance Program (SCHIP) premium programs for children's coverage for families in similar income levels, Washington's demonstration proposal is unusual in that it imposes premiums on a Medicaid population that has not previously been required to pay premiums for their children's coverage. This demonstration will provide valuable information to federal and state policy makers as they continue to modify their Medicaid programs to address fiscal constraints and to continue Medicaid reforms.

The 2004 State Supplemental Budget authorized the DSHS to adopt the following Medicaid premium design: (1) Categorically Needy-Optional (CN-O) children in households with incomes between 100% and 150% of the federal poverty guidelines (FPG) will have <u>no premium</u> requirements; and (2) CN-O children in households with incomes between 151% and 200% of FPG will have a <u>$10 per-month premium</u> requirement.[1] There will be a three-child family maximum (i.e., a $30 maximum monthly premium). This will ensure that no family pays more than 1.1% of gross household's income for their children's health coverage.

There will be no changes in benefits provided to the demonstration group. Sponsorship of partial or full payment of premiums by employers, providers other than Medicaid/SCHIP Healthy Options (HO) managed care contractors, and non-providers will be permitted.

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[1] Categorically Needy-Mandatory children in households with incomes above 150% of FPG will not be subject to premiums.

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 1 of 17

Eligibility will be terminated if the family owes all or part of the premium obligation for three months, but can be reinstated after a three month period of ineligibility and upon payment of all past due premiums.

This demonstration project is occurring at the same time as other major changes to publicly supported medical assistance in Washington State. Children in SCHIP with incomes between 201% and 250% of FPG will have their premiums increased from $10 to $15 per month. In addition, major changes in the State's Basic Health (BH) program were implemented in January 2004. The BH program provides reduced-cost health care coverage to low-income Washington State residents. The major changes to the BH include a $150 per person deductible, a 20% coinsurance requirement for certain services, a $1,500 per person out of pocket maximum, an increase in the office visit copayment from $10 to $15, and increased pharmacy copayments.

The changes to SCHIP and BH could interact in complex ways with the demonstration project. For example, there are 35,900 children in the BH Plus program (BHP+) whose families will now have premium requirements for both adult and child family members.[2] About 20% of BH adults have "financial sponsorship" from organizations to pay their premium obligations. These organizations may now need to consider whether to focus their financial support on BH adults, Medicaid children or SCHIP children. These factors coupled with increased BH cost-sharing requirements could impact adult family members' participation in BH. Changes in adult family members' coverage in BH could affect their willingness to continue their children's Medicaid coverage.

Washington also has implemented changes in its Medicaid eligibility policies that have affected program enrollment, and that pose design challenges to differentiate changes in enrollment levels due to eligibility policy versus premium implementation. In April 2003, DSHS began to require that all applications for Medicaid children's coverage and coverage for pregnant women have applicant's signatures. Income verification was also enhanced at that time. Beginning in July 2003, 12-month continuous eligibility for children was discontinued. The application review cycle for all Medicaid programs was set at 6-month reviews to coincide

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[2] The BHP+ program was implemented in 1994. This joint DSHS and state Health Care Authority (HCA) program allows adult family members to enroll in BH and their children to receive full-scope Medicaid coverage while remaining in the same health plan.

with other assistance programs. These changes have to date resulted in a reduction in both CN mandatory and CN-O children's enrollment.

DSHS is closely tracking these enrollment changes. The department has implemented an internal evaluation to assess what is causing the reduction in enrollment. In addition DSHS has employed additional staff to complete Medicaid reviews. The premium evaluation will account for the impact of these changes to identify enrollment effects associated with the introduction of premiums.

The evaluation design described in this document focuses on assessing the impact of the monthly premiums to be imposed on CN-O children between 151 and 200 percent of FPG. However, this evaluation is part of a broader effort on the part of the DSHS, the Washington State Health Care Authority (HCA), and the Governor's Policy Office to seek external funding to monitor and evaluate the impact of recent changes in publicly funded health insurance coverage in the State. In that effort, the combined impacts of eligibility changes and premiums on community clinics and uncompensated hospital care will be assessed.

The evaluation is designed to occur in stages. First, ongoing monitoring activities will track caseload trends, including entry and exit rates, length of stay, and the demographic composition and risk profile of the CN-O caseloads. First year monitoring activities will also include a telephone survey of a sample of early leavers, to assess why their families elected not to make premium payments. At the end of the first year of the demonstration, a report will be provided examining the first wave of survey data and early caseload impacts.

In addition, the first cohort of leavers will be re-interviewed in 12 months to assess the longer-term impacts on child health status, and at the end of the second year a second report will be provided examining changes in client survey outcomes. Also, a more rigorous assessment of the impact of premiums on enrollment will be completed at the end of the second year. At the end of the third year, a report will be provided on FQHC and hospital emergency department (ED) utilization that assesses the impact of the demonstration on the use of safety-net providers.[3] Finally, we will conduct a final survey wave of a new sample of leavers in the second half of calendar 2008. The findings from this survey and updated analyses of enrollment impacts will be provided in our final fifth-year evaluation report.

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[3] We will also explore the feasibility of surveying a sample of Rural Health Centers.

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 3 of 17

The remaining sections of this document provide a discussion of:

1. Demonstration hypotheses to be tested;

2. Outcome measures to evaluate the impact of the demonstration;

3. Data sources;

4. Methods of data collection;

5. How the effects of the demonstration will be isolated from those of other initiatives occurring in the State;

6. Other information pertinent to the evaluation;

7. The number of individuals whose eligibility is terminated for nonpayment of required premiums; and

8. How the premium structure will be monitored against undue burden on participants.

1. HYPOTHESES TO BE TESTED

The overarching hypothesis is to test whether modest monthly premiums for CN-O children between 151 and 200 percent of FPG will negatively affect children's enrollment in Medicaid, child health status, Medicaid program costs, or the broader health care delivery system. The proposed evaluation design will address these hypotheses by answering a set of research questions regarding the impact of premiums on program participation, health outcomes for affected clients, and the health care delivery system. The research questions are listed in Table 1. In subsequent sections we discuss the specific outcome measures, data sources, data collection strategies, and evaluation methodologies used to answer these research questions.

Impact on program participation

The first set of research questions concerns the impact of premiums on program participation. The prime question in this area is whether premiums significantly alter CN-O enrollment levels. Given the modest size of the premiums to be imposed, it may be that the impact of the demonstration on enrollment is quite small. The smaller the impact on enrollment, the smaller the potential impact of the demonstration project on other outcomes of interest, including impacts on the health status of affected clients and the health care delivery system. In addition to assessing the impact of premiums on the aggregate caseload level, we will examine whether premiums change the age, gender, race/ethnicity, language, or geographic composition

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 4 of 17

of the CN-O caseload. We will also consider whether the imposition of premiums have differential effects on enrollment based on the number of children or adults in the assistance unit.

For evaluation purposes, we will generally distinguish between three types of affected clients: those who choose to pay the premiums and remain enrolled ("stayers"), those who leave the program and don't re-enroll ("leavers"), and those who leave and return to the program ("cyclers").[4] In addition to assessing whether premiums change the number of children leaving the CN-O caseload, we will examine whether premiums change the number of children cycling on and off the caseload ("churning"), and assess the extent to which costs associated with churning may offset savings from caseload changes. For example, cycling could increase costs by increasing the number of eligibility determinations, or by increasing fee-for-service (FFS) costs that may be incurred if cyclers tend to return to the caseload when they need acute care. Therefore, we will also examine whether premiums change utilization patterns around entry and exit – in particular whether entries are more likely to occur around times of peak need for medical services and exits are more likely to occur following periods of low service use.

Beyond affecting the CN-O caseload level and rates of cycling on and off the CN-O caseload, the imposition of premiums could affect the rates at which clients' transition between CN-O and other publicly funded health insurance programs. To assess these effects, we will examine the impact of premiums on rates of transition between the affected CN-O caseload and (1) components of the Medicaid CN caseload that are not directly affected by premiums, (2) SCHIP, and (3) the BH program. These analyses will also help us to identify an appropriate comparison group (that is, one minimally impacted by the imposition of premiums, but subject to similar confounding temporal effects) for the estimation of the impact of premiums on enrollment.

We will examine whether premiums change the risk composition of the CN-O caseload. If premiums have a significant effect on enrollment levels, we would expect healthier (low-risk) children to be more likely to exit the caseload. This would increase the average risk associated with children remaining on the CN-O caseload, and tend to increase the per-capita costs associated with the ongoing CN-O caseload.

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[4] Analyses will also compare outcomes among more detailed subsets of these client types (e.g., leavers who exit due to non-payment of premiums, those who leave due to excess income, etc.).

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 5 of 17

Children beginning a spell on Medicaid tend to spend one to three months in FFS before enrolling in a managed care plan. Therefore, if premiums increase caseload churning and churners tend to have high utilization when they arrive back on Medicaid, then we may see an increase in the risk profile of the FFS component of the CN-O caseload, relative to the managed care component. Consequently, we will separately examine whether premiums change the risk composition of the managed care and fee-for-service (FFS) components of the CN-O caseload

Finally, we will assess the net impact of imposing premiums on the DSHS' Medicaid expenditures. This analysis will be based on estimated impacts on enrollment levels and per capita costs; impacts on eligibility determinations and associated costs due to churning; and impact on premium recoupment net of associated administrative costs.

Impacts on Members/Clients who left the program

The second set of research questions are concerned with the impact of the imposition of premiums on the circumstances of affected clients. We will assess the reasons why clients leave the CN-O program, using both the reason for exit recorded in administrative information systems and the reason reported in telephone surveys. Among clients returning to the caseload, we will assess self-reported reasons for re-entry.[5] We will examine whether parents strategically change their employment behavior in response to the imposition of premiums – for example reducing their income to avoid paying premiums.[6] We will examine whether parents strategically enroll children when they become ill and then leave the program when their children no longer need acute care. We will also measure changes in the proportion of children whose premiums are paid through a community-based sponsor.

Telephone surveys will also be used to measure whether leavers have health insurance coverage, and how much they pay out of pocket for medical care. We will identify where leavers usually get routine or preventive care, and whether they receive adequate preventive care and have access to specialty medical providers. We will measure emergency department (ED) and community clinic utilization. We will assess whether leavers delay care and have unmet needs for health care. We will measure leavers' functional health status, chronic health

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[5] By "self-reported" we mean as reported by the adult survey respondent regarding the circumstances of a specific "reference" child.
[6] By "parents" we mean adults in assistance units (AUs) with children in the affected CN-O eligibility categories.

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 6 of 17

conditions, and acute health conditions, and health behaviors (e.g., smoking, exercise, eating habits, sleep). We will assess whether leaving medical assistance is associated with changes in these conditions over time.

If the imposition of premiums affects the number of teenage girls with Medicaid coverage, the demonstration may have reproductive health impacts. While Washington State has programs which cover family planning for non-Medicaid populations, teenagers might be particularly likely not to learn about or use those programs. To assess this potential impact, we will examine whether there are changes in teen pregnancy rates, low birthweight birth rates, or infant mortality rates among teenage girls who leave Medicaid.

Impact on health care delivery system and community health outcomes

The imposition of premiums could affect the health care delivery system by shifting costs to other providers through increases in uncompensated care. Leaver survey data will provide a measure of the effect of premiums on the number of children who are uninsured, as well as measures of community clinic and emergency department utilization. In addition, we plan to survey FQHCs and hospital EDs to obtain additional information regarding the impact of premiums on clinic utilization, the proportion of children who are uninsured, and uncompensated clinic care. We will also explore the feasibility of implementing a similar survey of a sample of Rural Health Centers (RHCs) and emergency departments to assess the impact of premiums on RHC/ED utilization and the extent of uncompensated RHC/ED care. Finally, we will explore the feasibility of using encounter data from a sample of FQHCs and hospital EDs to directly measure the outcomes of interest. FQHC and hospital EDs encounter data would contain information on diagnoses and procedures that could paint a more complete picture of the impact of the demonstration on child health.

2. OUTCOME MEASURES TO EVALUATE IMPACTS

Table 1 lists the specific outcome measures to be used to answer the proposed research questions. The outcome measures used to estimate impacts on program participation will include monthly aggregate enrollment levels in the affected eligibility categories. We will also examine monthly enrollment levels disaggregated by demographic characteristics, including age, gender,

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 7 of 17

race/ethnicity, language, county, number of children in the assistance unit, and number of adults in the assistance unit.

We will measure aggregate monthly entries and exits from the affected eligibility categories. We will disaggregate entries and exits to measure rates of transition between the affected CN-O caseload and: (1) components of the Medicaid CN caseload that are not directly affected by premiums, (2) SCHIP, and (3) BH.

To assess the impact of premiums on "churning" we will measure the monthly mean completed spell length among leavers, as well the percentage of leavers who return within 6 months and the percentage of "arrivers" who were eligible in the affected CN-O eligibility categories in the 6 months prior to entry. We will also measure monthly trends in service utilization in the 60 days after entry (among arrivers) and in the 60 days before exit (among leavers). We will measure monthly counts of eligibility determinations and the average cost per eligibility determination to identify the administrative costs to the DSHS associated with increases in caseload churning.

We will measure the monthly mean Chronic Illness and Disability Payment System (CDPS)[7] risk-adjustment score for the ongoing CN-O FFS and managed care caseloads, as well as the monthly mean CDPS risk-adjustment score for leavers, using encounter data from the prior 12 months. We will measure mean annual capitation rates for the CN-O caseload.

As part of our assessment of the overall impact of the demonstration on the DSHS' Medicaid costs, we will also measure premium recoupment amounts and the administrative costs associated with the collection of premiums.

As detailed in Table 1, to assess the impact of premiums on clients we will rely primarily on measures constructed from data obtained from surveys of leavers. Survey items will be developed based on a review of established child health interview surveys (e.g., the National Health Interview Survey Child Core instrument, CAHPS). Survey items will measure:

- Self-reported reasons for exit from and re-entry onto the CN-O caseload.
- Health insurance status and out-of-pocket medical expenses for leavers
- Usual place of routine and preventive care
- Adequacy of preventive care, including immunizations

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[7] Kronick, Richard, Ph.D., Gilmer, Todd, Ph.D., Tony Dreyfus, M.C.P., and Lora Lee, M.S. 2000. Improving Health-Based Payment for Medicaid Beneficiaries: CDPS. Health Care Financing Review, Volume 21, Number 3, Spring.

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 8 of 17

- Use of the ER and community clinics
- Access to specialty medical providers
- Extent of delayed care and unmet need for health care
- Functional status, chronic and acute health conditions, and health behaviors
- Appropriateness of care for chronic and acute conditions

In addition to the survey-based outcome measures listed above, the following measures of client impacts will be derived from administrative data.

- Monthly exits by reason recorded in administrative data
- Monthly number of children receiving sponsorship support
- Percentage of adults in assistance units with exiting children who are employed in the exit quarter
- Mean quarterly earnings of employed adults in assistance units with exiting children who are employed in the exit quarter
- Annual birth rate, low birthweight rate, and infant mortality rate for leavers, stayers, and cyclers among girls aged 12+

A number of the outcome measures listed above are also relevant for assessing the impact of the demonstration on the health care delivery system. For example, measures listed above would help identify impacts on churning; on the number of uninsured children; and on community clinic and emergency department utilization.

At a minimum we plan to survey FQHCs and hospital EDs to obtain additional information regarding the impact of premiums on clinic and ED utilization, the proportion of children who are uninsured, and uncompensated clinic and ED care. We plan to develop a survey instrument to measure the number of service encounters per child (leaver) in the year before and the year after exit, and the health insurance coverage status of the child at each encounter. From these measures we will be able to assess the effect of the demonstration on uncompensated and subsidized care provided through community clinics and EDs. As noted above, we will explore the feasibility of collecting similar survey information from a sample of Rural Health Centers, and explore the feasibility of directly using encounter data from a sample of FQHCs and hospital EDs to measure impacts in this area.

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 9 of 17

3. DATA SOURCES

The evaluation will use a combination of data from the DSHS' administrative information systems, administrative data from other state agencies, data from community clinics, and data from telephone surveys of leavers. Our proposed survey data collection methodologies are described in detail in Section 4.

Table 1 lists the data sources that will be used to construct the outcome measures to address specific research questions. In several instances data sources will be linked at the client level to conduct specific analyses. For example, eligibility data will be linked to encounter data to measure the impact of premiums on the CN-O risk pool.

The proposed data sources include:

- Client eligibility data – used to measure impacts on enrollment levels, entry and exit rates, enrollment spell lengths, etc. Used to identify populations of leavers, stayers, cyclers, in the affected CN-O population, as well as comparison groups.

- Automated Client Eligibility System (ACES) data – used to measure client demographic characteristics. Used in combination with client eligibility data to measure trends in caseload demographics for the affected CN-O group and comparison groups. Used with eligibility data to define survey populations stratified by client demographics (e.g., age and gender). Used to measure administrative reasons for exit and the number of eligibility reviews.

- Service encounter data – linked to eligibility data to measure risk composition of the affected CN-O caseload, leavers, and comparison groups. Linked to survey data to control for effects of baseline differences in the health status of leavers. Also used to measure trends in utilization around entry and exit.

- Office of Financial Recovery – premium recoupment data,

- First Steps Database – linked Medicaid claims, medical assistance eligibility, and Department of Health birth and death data for infants and mothers.

- Employment data from the Employment Security Department (ESD).

- Monthly BH program enrollment data.

- Client survey data

- FQHC and Hospital ED survey data

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 10 of 17

- Rural Health Center survey data – if feasible
- FQHC and hospital ED encounter data – if feasible.

4.   METHODS OF DATA COLLECTION

DSHS staff have extensive experience analyzing the agency's administrative data, including the linkage of data from the DSHS information systems and databases required for the proposed evaluation activities. Data extraction and linkage will be performed by experienced DSHS staff using established methods. All data presented in reports will involve aggregate statistics derived from "de-identified" data.

ESD employment data. DSHS research staff has extensive experience linking ESD employment data and DSHS eligibility data. DSHS will establish a data sharing agreement with the Employment Security Department to link ESD data to DSHS eligibility data for the purposes of this evaluation.

BH program enrollment data. DSHS will establish a data sharing agreement with the Health Care Authority to link BH enrollment data to medical assistance eligibility data for the purposes of this evaluation.

Client survey data. Telephone surveys of leavers will be conducted to collect data that cannot be obtained from administrative sources, including leavers' health insurance status, service utilization, and health outcomes.

Premiums are scheduled to be implemented in July 2004. Eligibility will be terminated if the family owes all or part of the premium obligation for three months, so we anticipate the first exits from the CN-O caseload due to non-payment of premiums to occur in October 2004. We propose sampling leavers from the first three months in which exits occur due to non-payment of premiums, which we expect to be October through December 2004. Allowing two months run-out for eligibility data to mature and to allow time for stratified sampling by age and gender, we expect samples to be fielded on a monthly flow basis over the December 2004 to February 2005 period, with interviews completed by the end of April 2005. We anticipate that survey results will be available at the end of June 2005. We will field a second survey of the same clients timed to occur approximately 12 months following the initial interview.

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 11 of 17

Leavers will be defined by the circumstances extant at the time when samples are initially selected. By the time of the second interview, some leavers will return to the caseload to become "cyclers." Thus, the proposed longitudinal survey design would also allow us to compare outcomes between clients who remain off the caseload and those who cycle back onto Medicaid.

We propose a sampling design which selects a specific "reference adult" and "reference child" from the assistance unit using administrative data from the ACES system. Stratified samples of leavers (reference children) will be selected by age and gender. We anticipate sampling 1,000 leavers. With a 60 percent wave 1 response rate and a 75 percent follow-up rate at wave 2, this sample size translates into 600 completed interviews for at wave 1 and 450 completed interviews at wave 2. The survey instrument will be translated and back-translated into Spanish and perhaps Russian. The many other languages that may occur only a few times will be directly translated in real time by people fluent in both languages.

We propose developing the survey instrument based on a review of established child health interview surveys (e.g., National Health Interview Survey Child Core instrument, CAHPS), with supplementary items specific to the context of this demonstration project (e.g., reasons for exit, reasons for re-entry).

We will also conduct a final survey round in 2008 as part of our final fifth-year evaluation. Because it would not be feasible to track clients from the early survey rounds due to high rates of attrition, we will draw a new sample of leavers in 2008. We anticipate that the survey design will be similar to that proposed above for the first survey rounds.

FQHC and hospital ED survey data. Client eligibility and ACES data will be used to identify children who leave Medicaid due to non-payment of premiums. Additional information is available to identify the FQHCs used by these leavers in the year prior to exit. A mail survey will be sent to all FQHC sites serving children who exit due to non-payment of premiums. With regard to emergency departments, the design would be modified slightly because administrative data are not available to directly identify the specific emergency departments serving managed care CN-O children. Leavers will be mapped to emergency departments by defining hospital catchment areas. We will explore the feasibility of employing analogous techniques to survey Rural Health Centers.

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 12 of 17

We anticipate that the survey would be conducted no earlier than the fall of 2005, approximately 12 months after the first cohort of leavers exit due to non-payment of premiums. The survey will have items measuring the number of service encounters per child (leaver) in the year before and the year after exit, and the health insurance coverage status of the child at each encounter. If feasible within HIPAA constraints, identified data will be collected to permit accurate measurement for children who use multiple clinics or EDs.

If the number of affected children served by the clinic/ED is small, then the clinic/ED will be surveyed regarding all the affected children it served in the year prior to exit. If the number of affected children served by the clinic/ED is large, then the clinic/ED will be surveyed regarding a sample of the affected children it served in the year prior to their exit from Medicaid. The large/small cut point will be determined in consultation with the clinics and EDs. Clinics and EDs will also be surveyed regarding a sample of stayer children to control for natural attrition in clinic use.[8] Children will be sampled systematically by age, gender, and baseline health conditions (as measured in encounter data, if feasible). Follow-up telephone calls will be conducted to increase the survey response rate.

FQHC and hospital ED encounter data. If feasible, and pending the establishment of necessary data sharing agreements that conform to HIPAA requirements, we propose obtaining a set of utilization measures from administrative data from a sample of FQHCs and hospital EDs. We would need to draw a stratified sample of clinics, since they will generally have different payment and billing systems. Sample clinics will be selected based on a set of criteria including technical capacity, geographic location (East/West, urban/rural), and catchment area or clinic demographic characteristics. The specific methods of data collection will be determined collaboratively with the participating clinics. If this data collection effort is feasible, we anticipate measuring service utilization by coverage status for leavers in the year before and year after exit, with comparable measures developed for a comparison group of stayers. We also anticipate using diagnosis and procedure information available in the FQHC and Hospital ED encounter data to characterize changes in child health status.

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[8] This phenomenon is often referred to as "regression to the mean."

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 13 of 17

5. HOW DEMONSTRATION EFFECTS WILL BE ISOLATED FROM EFFECTS OF OTHER INITIATIVES OCCURRING IN THE STATE

Demonstration effects on program participation will be evaluated using an interrupted time series (ITS) approach. The basic ITS approach will be augmented through the use of comparison groups selected from Medicaid eligibility groups that are likely to be subject to similar confounding temporal effects, but are not significantly impacted by the imposition of premiums. The most important potential confounding effects are expected to be seasonal and cyclical changes in economic conditions, seasonal changes in utilization (e.g., at Christmas and the start of the school year), seasonal changes in enrollment, changes in demographics, and other changes in Medicaid eligibility rules. We anticipate constructing time series of program participation outcome measures for the affected CN-O group and the selected comparison group from July 2002 forward.

The first comparison group we will consider using will be CN-O children between 100 and 150 percent FPG (CN-O 100-150). These children will not be subject to premiums under the current design. However, it may be that the CN-O 100-150 group is indirectly affected by the imposition of premiums through increased entries from the CN-O 151-200 group. This would occur if there is a tendency for adults in directly affected assistance units to reduce their earnings to avoid being subject to premiums. We will be able to identify this behavior if it occurs by tracking pre-post changes in the rate of transitions between the CN-O 100-150 and CN-O 151-200 caseload. If the CN-O 100-150 caseload is subject to significant indirect effects, we will consider using the CN-Mandatory caseload as an alternative comparison group.

We will construct time series of the program participation outcome measures listed in Table 1 both for CN-O 151-200 children and the children in the selected comparison group. We will first create graphical representations of the time series, which will help inform model specification decisions (e.g., modeling seasonal effects, validity of assuming fixed-effect differences between CN-O 151-200 caseload and comparison groups). We will then use regression models to estimate the impact of premium changes on the various outcome measures. In general, we will use a piecewise linear coding scheme for time effects to separate the impact of the imposition of premiums from other potentially confounding policy effects that occur during the evaluation period. The regression models will also be used to produce simple

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 14 of 17

graphical "counterfactuals" to depict estimates of outcomes (e.g., aggregate enrollment, mean risk adjustment score) that would have occurred if premiums had not been imposed.

Client survey measures of health outcomes will be available only for our samples of leavers. Because surveys will be fielded only after implementation of the premium changes, we will be limited to measuring post-period levels and post-period changes in outcomes for leavers. We will explore the feasibility of using CAHPS survey results to create a benchmark for comparing leavers' survey outcomes to outcomes for children who continue on Medicaid.

We propose to control for the confounding effect of baseline differences in health status by linking individual survey data to individual baseline risk-adjustment scores derived from encounter data. Survey data then could be analyzed in a regression framework using the baseline risk-adjustment scores to control for pre-demonstration differences in health status that otherwise could confound survey-based estimates of impacts on health status.

The impact of premiums on FQHC and hospital ED survey measures will be estimated using a difference-in-differences approach. By focusing the data collection effort on services provided to children who exit Medicaid specifically due to non-payment of premium (as opposed to using aggregate clinic utilization data), this design will provide a direct measure of the impact of premiums on clinic utilization and uncompensated care. Furthermore, the differences-in-differences approach controls for certain forms of selection bias (that is, when the effect of bias is constant across the pre and post periods) and controls for potentially confounding time effects that influence outcomes for leaver and stayer children in a similar fashion. For leavers we will measure changes in outcomes (e.g., number of clinic visits, number of uncompensated clinic visits) from the year prior to exit to the year after exit. For comparison stayers we will measure changes in outcomes over a comparable time period. We will compare differences in changes in outcomes between leavers and stayers in a regression framework, controlling for differences in baseline health status (using risk adjustment scores derived from pre-period medical encounters) and child demographic characteristics (age, gender, race/ethnicity, geographic region).

If we are able to expand the FQHC and hospital ED survey effort to include Rural Health Centers, we will apply the same methodology to analyzing Rural Health Center survey data. If we are able to analyze encounter data from a sample of FQHCs and hospital EDs, we will apply an analogous methodology to analyzing that data.

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 15 of 17

6.   OTHER INFORMATION PERTINENT TO THE DEMONSTRATION EVALUATION.

As noted in the overview, this demonstration project is occurring at the same time as other major changes to publicly supported medical assistance in Washington State. Children in SCHIP with incomes between 201% and 250% of FPG will have their premiums increased from $10 to $15 per-month. In addition, major changes in the State's BH program were implemented in January 2004, including a $150 per person deductible, a 20% coinsurance requirement for certain services, a $1,500 per person out of pocket maximum, an increase in the office visit copayment from $10 to $15, and increased pharmacy copayments.

Because changes to SCHIP and BH could interact in complex ways with the demonstration project, this evaluation is part of a broader effort on the part of the DSHS, the Washington State Health Care Authority (HCA), and the Governor's Policy Office to monitor and evaluate the impact of recent changes in publicly funded health insurance coverage in the State. In that effort, the combined impacts of eligibility changes and premiums on community clinics and uncompensated hospital care will be assessed.

7.   NUMBER OF INDIVIDUALS WHOSE ELIGIBILITY IS TERMINATED FOR NONPAYMENT OF REQUIRED PREMIUMS.

Eligibility will be terminated if the family owes all or part of the premium obligation for three months, but can be reinstated after a three month period of ineligibility and upon payment of all past due premiums. Premiums are scheduled to be implemented in July 2004, so we anticipate the first exits from the CN-O caseload due to non-payment of premiums to occur in October 2004. The number of individuals whose eligibility is terminated for nonpayment of required premiums will be measured directly through the DSHS's eligibility information system (ACES). In addition to measuring this number on a monthly basis, we will compare self-reported reasons for exit from survey data with the administrative reason recorded in ACES.

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 16 of 17

8. HOW THE PREMIUM STRUCTURE WILL BE MONITORED AGAINST UNDUE BURDEN ON PARTICIPANTS AND ELIGIBLES.

CN-O children in households with incomes between 151% and 200% of FPG will have a $10 per-month premium requirement. There will be a three-child family maximum (i.e., a $30 maximum monthly premium). This will ensure that no family pays more than 1.1% of gross household's income for their children's health coverage. We also will measure the amount of financial sponsorship provided to CN-O and SCHIP children. We will compare sponsorship participation in BH to assess whether sponsors are shifting participation from BH adults to Medicaid children.

State of Washington
Department of Social and Health Services
Medicaid Premium Demonstration Evaluation Design
May 18, 2004

Page 17 of 17

TABLE 1. HYPOTHESES, OUTCOME MEASURES, AND DATA SOURCES

HYPOTHESIS TO BE TESTED	OUTCOME MEASURES	DATA SOURCES
Impacts on program participation		
What is the impact on monthly Medicaid enrollment levels?	Enrollment counts	MAA eligibility data
Does enrollment fluctuate due to changes in the entry rate or the exit rate?	Exits and entry counts	MAA eligibility data
Does the amount of "churning" (children cycling on and off the caseload) change?	Proportion of leavers who return with 6 months; Proportion of "arrivers" who were on caseload in previous 6 months	client-level MAA eligibility data
If the amount of churning changes, what are the associated costs to the Department?	Number of eligibility reviews; average cost per eligibility review	ACES linked to client-level MAA eligibility
Does the length of the average enrollment spell or the average enrollment gap change?	Monthly mean completed spell length among leavers; mean spell off aid among returning cyclers	client-level MAA eligibility data
Do utilization patterns during the first and last 60 days of coverage change? Are entries more likely to occur around times of peak need for medical services? Are exits more likely to occur following periods of low service use?	Measures of service utilization in the first and last 60 days of coverage change	client-level MAA eligibility linked to encounter data
Do rates of transition between Medicaid and other publicly funded medical assistance programs change?	Counts of transitions among CN-O 151-200, CN-O 100-150, S-CHIP, and BHP programs	client-level MAA eligibility linked to BHP eligibility data
Does the demographic composition of the CN-O caseload change (e.g., age, gender, race/ethnicity, language, AU composition, or geographic distribution)?	Enrollment levels by demographic characteristic: age, gender, language, race/ethnicity, county, number of children in AU, number of adults in AU	ACES linked to client-level MAA eligibility

TABLE 1. HYPOTHESES, OUTCOME MEASURES, AND DATA SOURCES

HYPOTHESIS TO BE TESTED	OUTCOME MEASURES	DATA SOURCES
Does the risk composition of the CN-O caseload change? Are healthier (low-risk) children more likely to exit?	Mean CDPS risk-adjustment score for leavers and the ongoing caseload (using prior 12 months of encounter data)	client-level MAA eligibility linked to encounter data
If the risk composition of the caseload changes, what is the impact on per-capita costs for CN-O caseload?	Change in CN-O risk-adjustment score	client-level MAA eligibility linked to encounter data
Is there a net reduction in the Department's Medicaid expenditures, administrative costs, and total program costs?	Difference between counterfactual estimates of costs and observed costs; Includes effects on enrollment levels, per-capita costs, premium recoupment, premium processing costs, and eligibility determination costs.	Multiple administrative data sources
Impacts on clients who left the program		
Why do clients leave the CN-O program following the imposition of premiums? Do self-reported reasons for exit differ from reasons recorded in data?	Monthly exits by reason recorded in administrative data; Self-reported reason for exit recorded in survey data	ACES linked to client-level MAA eligibility; client survey
If clients cycle back, why?	Self-reported reason for return recorded in survey data	Client survey
How many children have premiums paid by sponsors, including employers, providers, and other third parties?	Monthly count of children receiving sponsorship support	Administrative data
Do parents change their employment behavior strategically in response to the imposition of premiums (e.g., reduce income to avoid paying premiums)?	Percentage of adults in assistance units with exiting children who are employed in the exit quarter; Mean quarterly earnings of employed adults in assistance units with exiting children	Eligibility data linked to employment data

TABLE 1. HYPOTHESES, OUTCOME MEASURES, AND DATA SOURCES

HYPOTHESIS TO BE TESTED	OUTCOME MEASURES	DATA SOURCES
Do leavers have other health insurance coverage? If so, what type? How much do they pay out of pocket?	Self-reported health insurance status and medical expenses	Client survey
Where do leavers usually get routine or preventive care? Do leavers receive adequate preventive care?	Self-reported	Client survey
Are leavers less likely to have up-to-date immunizations?	Self-reported	Client survey
How does leavers' use of hospital emergency departments (ED) and community clinics compare to clients who remain enrolled?	Self-reported utilization; Pre and post counts of encounters;	Client survey; FQHC and hospital ED surveys (if feasible RHCs); FQHC and ED encounter data if feasible
Do leavers delay care? Do they have unmet needs for health care that are different from enrollees?	Self-reported	Client survey
How do leavers, cyclers, and stayers differ in their baseline chronic health conditions? How do they differ in their baseline acute health conditions?	Baseline CDPS scores	Encounter and FFS data
Is leaving Medicaid associated with changes in functional status, health conditions, or health behaviors over time?	Self-reported	Client survey
Do leavers receive appropriate care for chronic health conditions?	Self-reported	Client survey
Do leavers receive appropriate care for acute health conditions?	Self-reported	Client survey
Are there impacts on the reproductive health of teenage girls who exit the caseload? Are there increases in teen births? Are there increases in low birthweight births? Are	Annual birth rates for leavers, stayers, and cyclers among girls aged 12+. Percent of low birthweight births; infant	MAA eligibility data linked to client-level First Steps Database

TABLE 1. HYPOTHESES, OUTCOME MEASURES, AND DATA SOURCES

HYPOTHESIS TO BE TESTED	OUTCOME MEASURES	DATA SOURCES
there increases in infant mortality?	mortality rate	
Impact on health care delivery system and community health outcomes		
Do premiums increase the proportion of children who are uninsured?	Self-reported; Change in number of uninsured service encounters from FQHC and ED surveys (RHC survey if feasible)	Client survey; FQHC and ED surveys
If fewer children are enrolled under the Demonstration, does utilization of community clinics and EDs increase?	Self-reported; Change in number of service encounters from FQHC and ED surveys (RHC survey if feasible)	FQHC and ED surveys (RHC survey if feasible)
Do premiums shift costs from the Department to hospitals, clinics, and other safety-net providers? Does uncompensated care increase?	Change in number of uninsured service encounters from FQHC and ED surveys (RHC survey if feasible)	FQHC and ED surveys (RHC survey if feasible)